

CLAIM AMENDMENTS:

Pending Claims

Claim 1 (Canceled).

Claim 2 (Previously Presented): The assembly as recited in claim 7, wherein said fixed structure comprises an air shaft extending the full length of said tube and more, said air shaft comprising an inlet, said passageway and an outlet, said inlet being in fluid communication with said outlet via said passageway, and, said chamber being in fluid communication with said passageway via said outlet.

Claim 3 (Previously Presented): The assembly as recited in claim 7, wherein each of said first and second end cap assemblies comprises a respective end cap and a respective bearing fitted into said respective end cap, said end caps forming substantially airtight interfaces with said tube.

Claim 4 (Original): The assembly as recited in claim 3, wherein each of said end caps is made of hard rubber molded around said respective bearing.

Claim 5 (Previously Presented): The assembly as recited in claim 7, wherein said tube is made of soft closed-cell rubber.

Claim 6 (Previously Presented): The assembly as recited in claim 7, wherein said tube resists radially outward deformation more than it resists radially inward deformation.

Claim 7 (Currently Amended): An assembly comprising:

a generally circular cylindrical tube made of resilient material, said tube forming an airtight outer circumferential boundary of a chamber;

first and second end cap assemblies supporting said tube at opposite ends thereof and forming respective end boundaries of said chamber; and

a fixed structure that supports said first and second end cap assemblies, said first and second end cap assemblies being rotatable relative to said fixed structure, wherein said fixed structure comprises a passageway that is in fluid communication with said chamber,

wherein said tube comprises a multiplicity of annular transverse cuts extending from an inner peripheral surface of said tube toward, but not reaching, an outer peripheral surface of said tube, each pair of adjacent annular transverse cuts bounding a respective annular ring section in an inner peripheral portion of said tube, each of said annular ring sections being integrally formed with an uncut outer peripheral portion of said tube, said annular ring sections and said uncut outer peripheral portion being made of said resilient material.

Claim 8 (Original): The assembly as recited in claim 7, wherein each of said annular transverse cuts has a depth that is constant in a circumferential direction, said depth being the same for each of said annular transverse cuts.

Claim 9 (Original): The assembly as recited in claim 8, wherein said annular transverse cuts are axially spaced at

equal intervals along said tube.

Claim 10 (Original): The assembly as recited in claim 3, wherein each of said bearings comprises a respective ring of ultra-high-molecular weight plastic material.

Claim 11 (Previously Presented): A roller setup comprising a hard roller and said assembly as recited in claim 7, said hard roller and said tube forming a nip.

Claims 12 and 13 (Canceled).

Claim 14 (Previously Presented): The assembly as recited in claim 18, wherein each of said first and second end cap assemblies comprises a respective end cap and a respective bearing fitted into said respective end cap, said end caps forming substantially airtight interfaces with said tube.

Claim 15 (Original): The assembly as recited in claim 14, wherein each of said end caps is made of hard rubber molded around said respective bearing.

Claim 16 (Previously Presented): The assembly as recited in claim 18, wherein said tube is made of soft closed-cell rubber.

Claim 17 (Previously Presented): The assembly as recited in claim 18, wherein said tube resists radially outward deformation more than it resists radially inward deformation.

Claim 18 (Previously Presented): An assembly comprising:

an air shaft comprising an inlet, a passageway and an outlet, said inlet being in fluid communication with said outlet via said passageway;

a pneumatic roller rotatably mounted to said air shaft and configured to form an annular chamber surrounding a portion of said air shaft, said passageway of said air shaft being in fluid communication with said chamber via said outlet of said air shaft; and

first and second collars fixedly mounted to said shaft at respective positions adjacent opposite ends of said pneumatic roller; said first and second collars restricting axial movement of said pneumatic roller relative to said shaft without restricting rotational movement of said pneumatic roller about said shaft,

wherein said pneumatic roller comprises:

a generally circular cylindrical tube made of resilient material, at least a portion of said tube forming an airtight outer peripheral boundary of said chamber; and

first and second end cap assemblies rotatably mounted to said air shaft at opposite ends of said chamber, said first end cap assembly being fitted inside one end of said tube and said second end cap assembly being fitted inside the other end of said tube,

wherein said tube comprises a multiplicity of annular transverse cuts extending from an inner peripheral surface of

said tube toward, but not reaching, an outer peripheral surface of said tube.

Claim 19 (Original): The assembly as recited in claim 18, wherein each of said annular transverse cuts has a depth that is constant in a circumferential direction, said depth being the same for each of said annular transverse cuts.

Claim 20 (Original): The assembly as recited in claim 19, wherein said annular transverse cuts are axially spaced at equal intervals along said tube.

Claim 21 (Previously Presented): A roller setup comprising a hard roller and said assembly as recited in claim 18, said hard roller and said pneumatic roller forming a nip.

Claims 22-32 (Canceled).